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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,774	10/09/2006	Kazuya Okada	TNKP102US	4276

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EXAMINER	
CHRISS, JENNIFER A	

ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
04/02/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/599,774	OKADA ET AL.	
	Examiner	Art Unit	
	JENNIFER A. CHRISS	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 15* is/are pending in the application.

4a) Of the above claim(s) *6 and 7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 8 - 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/09/2006 7/23/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group 1, claims 1 – 5 and 8 – 15, in the reply filed on February 16, 2009 is acknowledged. Claims 6 – 7 are withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 – 5, 8 - 11 and 13 - 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Takase et al. (US 2002/0090876).

Takase et al. is directed to a battery separator [0071].

Takase et al. teach a nonwoven fabric battery separator having a maximum pore size of 1.9 times or less than a mean flow pore size [0071] with the maximum pore size being 30 microns or less [0070]. The nonwoven fabric can be made of various materials including polymethylenpentene-based resin (4-methyl-1-pentene) [0016]. Takase et al. teach that the void rate of the nonwoven fabric is preferably 45 to 65% [0072] which is completely encompassed by Applicant's claimed range. Takase et al. teach that the nonwoven battery separator may be prepared by laminating a plurality of fiber webs, so as long as this satisfies that the laminate is uniform with respect to the average fiber

diameter [0012]. The Examiner submits that any additional material laminated to the battery separator will act as "a strength retention material". Takase et al. teach that the nonwoven fabric is used a battery separator which is a type of filter.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 12 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takase et al. (US 2002/0090876).

Takase et al. is directed to a battery separator [0071]. Takase et al. teach a nonwoven fabric battery separator having a maximum pore size of 1.9 times or less than a mean flow pore size [0071] with the maximum pore size being 30 microns or less [0070]. The nonwoven fabric can be made of various materials including polymethylenpentene-based resin (4-methyl-1-pentene) [0016]. Takase et al. teach that the void rate of the nonwoven fabric is preferably 45 to 65% [0072] which is completely encompassed by Applicant's claimed range. Takase et al. teach that the fiber web may be made by melt-blowing [0086]. Absent a showing to the contrary, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The

patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1- 5 and 8 – 15 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 2 of U.S. Patent No. 7,183,020 to Sudou et al. in view of Takase et al. (US 2002/0090876). U.S. Patent No. 7,183,020 claims a battery separator made of a meltblown nonwoven fabric comprising a 4-methyl-1-pentene polymer where the separator has a porosity of 30 to 60%. U.S. Patent No. 7,183,020 fail to teach a maximum pore size of 0.5 to 5.0 microns, a ratio of 1.30 or lower and a strength retention material laminated thereon. Takase et al. is directed to a battery separator [0071]. Takase et al. teach a nonwoven fabric battery separator having a maximum pore size of 1.9 times or less than a mean flow pore size [0071] with the maximum pore size being 30 microns or less [0070]. The nonwoven fabric can be made of various materials including polymethylenpentene-based resin (4-methyl-1-pentene) [0016]. Takase et al. teach that the void rate of the nonwoven fabric is preferably 45 to 65% [0072] which is completely encompassed by Applicant's claimed range. Takase et al. teach that the nonwoven battery separator may be prepared by laminating a plurality of fiber webs, so as long as this satisfies that the laminate is uniform with respect to the average fiber diameter [0012]. The Examiner submits that any additional material laminated to the battery separator will act as "a strength retention material". Takase et al. teach that the nonwoven fabric is used a battery separator which is a type of filter. It would have been obvious to one of ordinary skill in the art at the time the invention was made to create a maximum pore size of 0.5 to 5.0

microns with a ratio of 1.30 or lower motivated by the desire to create a battery separator having good uniformity which avoids short circuiting during use [0070]. Additionally, it would have been obvious to one of ordinary skill in the art at the time the invention was made to laminate an additional material to the nonwoven in order to further strengthen the battery separator.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Shigematsu et al. (US 7,405,172) is directed to a separator (column 22, lines 45 - 55). Shigematsu et al. teach a non-woven fabric separator comprising composite fibers formed from semi-aromatic polyamide and polymethylpentene (poly(4-methyl-1-pentene) having a maximum pore diameter of 50 microns or less and an average pore diameter of 20 microns or less (column 22, lines 45 – 55).

10. Aikawa et al. (US 6,284,680) is directed to a nonwoven filter fabric (Title). Aikawa et al. teach a nonwoven fabric having a narrow distribution of pore sizes, preferably where the maximum pore size is not more than 1.9 times a mean flow pore size and ideally the maximum pore size is the same as the mean flow pore size (column 7, lines 20 - 35).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. CHRISS whose telephone number is

(571)272-7783. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 6 p.m., first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A Chriss/
Primary Examiner, Art Unit 1794

/J. A. C./
Primary Examiner, Art Unit 1794